NON-PUBLIC?: N
ACCESSION #: 8812210007
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Braidwood Unit 1 PAGE: 1 OF 4

DOCKET NUMBER: 05000456

OTHER FACILITIES INVOLVED: Braidwood Unit 2

DOCKET NUMBER: 05000457

TITLE: Manual Reactor Trips due to approaching Low Low Steam Generator Levels as a Result of Instrument Air
EVENT DATE: 11/15/88 LER #: 88-025-00 REPORT DATE: 12/13/88

OPERATING MODE: 1 POWER LEVEL: 096

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: Paul Nykaza, Technical Staff Engineer TELEPHONE: (815) 458-2801 ext. 2477
COMPONENT FAILURE DESCRIPTION:
CAUSE: B SYSTEM: LD COMPONENT: PSF* MANUFACTURER: M476
REPORTABLE TO NPRDS: N

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT:

At 0904 on November 15, 1988 low instrument air pressure was observed. The rapid decrease in the instrument air header pressure caused the feedwater regulating valves to go closed. This decreased flow to the steam generators on both units. At 0908 both Units were manually tripped due to decreasing steam generator levels. The cause of this event was inadequate installation of a coupling in the instrument air header, line OIA05B during construction. The inadequate solder joint was stressed by contract personnel standing on the line. The instrument air header was isolated and the line repaired by replacing the joint. The line was inspected upstream and downstream of the break for other possible leaks that may have occurred as a result of the break. Two other joints were repaired for pinhole leaks. Additional pipe supports will be added to the header. A letter was issued on November 16, 1988 to all site personnel reemphasizing the need for all personnel to exercise care in working around all plant equipment. There have

been no previous occurrences of a reactor trip as a result of a loss of instrument air.

END OF ABSTRACT

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: Braidwood 1; Event Date: November 15, 1988; Event Time: 0908;
Mode: 1 - Power Operation; Rx Power: 96%;

RCS AB! Temperature/Pressure: 585 degrees F/2235 psig

Unit: Braidwood 2; Event Date: November 15, 1988; Event Time: 0908;

Mode: 1 - Power Operation; Rx Power: 79%;

RCS AO! Temperature/Pressure: 578 degrees F/2240 psig

B. DESCRIPTION OF EVENT:

At 0904 on November 15, 1988 low instrument air (IA) LD! receiver pressure was observed by control room personnel. Operators were dispatched to check for instrument air leaks. The rapid decrease in the instrument air header pressure caused the feedwater (FW) SJ! regulating valves, (2)lFW510, (2)1FW520, (2)lFW530, and (2)1FW540, to go closed. This decreased flow to the steam generators (SG) JB! on both units.

At 0908, both Units were manually tripped due to decreasing steam generator levels.

Operator actions decreased the severity of this event since the reactors were manually tripped prior to any Engineered Safety Feature (EF) JE! actuation.

The Auxiliary Feedwater (AF) BA! pumps automatically started to maintain steam generator levels as designed.

The appropriate NRC notification via the ENS phone system was made at 1000 pursuant to 10CFR50.72(a)(1)(i), and 10CFR50.72(b)(2)(ii).

Braidwood Station met with NRC Region III personnel on December 6, 1988, to discuss this event and proposed corrective actions.

This event is being reported pursuant to 10CFR50.73(a)(2) (iv) - any event or condition that resulted in manual or automatic actuation of any Engineered

Safety Feature, including the Reactor Protection System.

C. CAUSE OF EVENT:

The root cause of this event was inadequate installation of a copper coupling in the instrument air header, line OIA05B during construction. The inadequate solder joint was stressed by contract personnel standing on the line.

When operators arrived at the break location, there was evidence that the line had been used to stand on while painting another line above it. The painting of the line above had abruptly ended directly above the break and a wet paint roller was found on the floor below the broken line. It was verified that a painter had been standing on the line.

C. CAUSE OF EVENT: (continued)

The resulting loss of instrument air caused the feedwater regulating valves to go closed. This resulted in a reduction of feedwater flow to the steam generators leading to the manual reactor trips.

D. SAFETY ANALYSIS:

This event had no effect on the safety of the plant or the public. All engineered safety systems operated as designed.Under the worst case conditions of a plant operating at 100% power with a loss of instrument air and no operator action, there would be no additional adverse impact on the safety of the plant or public as this is enveloped by the Final Safety Analysis Report (FSAR), Process Auxiliaries.

E. CORRECTIVE ACTIONS:

The immediate corrective action was to recover steam generator levels and establish stable conditions.

The instrument air header was isolated and the line repaired by replacing the joint. The line was also inspected upstream and downstream of the break for other possible leaks which may have occurred as a result of the break. Two other joints were repaired for pinhole leaks. Additional pipe supports will be added to the header. This will be tracked to completion by action item 456-200-88-26701.

PWR Engineering will evaluate the solder quality for portions of the IA System by sampling a few of these joints during the Unit 2 surveillance outage. Any additional actions will be based on the results of this sample. This will be

tracked to completion by Action Item 456-200-88-26702.

Braidwood letter 88-1439 was issued on November 16, 1988 to all site personnel reemphasizing the need for all personnel to exercise care in working around all plant equipment.

F. PREVIOUS OCCURRENCES:

There have been no previous occurrences of a reactor trip as a result of a loss of instrument air.

G. COMPONENT FAILURE DATA:

Manufacturer Nomenclature Model Number MFG Part Number

Mueller Brass Elbow, turbine; 45 deg N/A N/A
4 inch copper

Mueller Brass Elbow tubing; 90 deg N/A N/A
4 inch copper

Mueller Brass Coupling; tubing; N/A N/A
4 inch copper

Mueller Brass Turbine; copper; N/A N/A
4 inch x 20 ft.
Type K Hard temper
ASTM B888.

Commonwealth Edison

Braidwood Nuclear Power Station
Route 1, Box 84
Braceville, Illinois 60407
Telephone 815/458-2801

December 12, 1988
BW/88-1547

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Dear Sir:

The enclosed Licensee Event Report from Braidwood Generating Station is being transmitted to you in accordance with the requirements of 10CFR50.73(a)(2)(iv) which require a 30 day written report.

This report is number 88-025-00; Docket No. 50-456.

Very truly yours,

R. E. Querio
Station Manager
Braidwood Nuclear Station

REQ/AJS/jab
(7126z)

Enclosure: Licensee Event Report No. 88-025-00

cc: NRC Region III Administrator
NRC Resident Inspector
INPO Record Center
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